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OHIO

A SKETCH OF

INDUSTRIAL PROGRESS

BY

JOHN T. SHORT, PH. D.

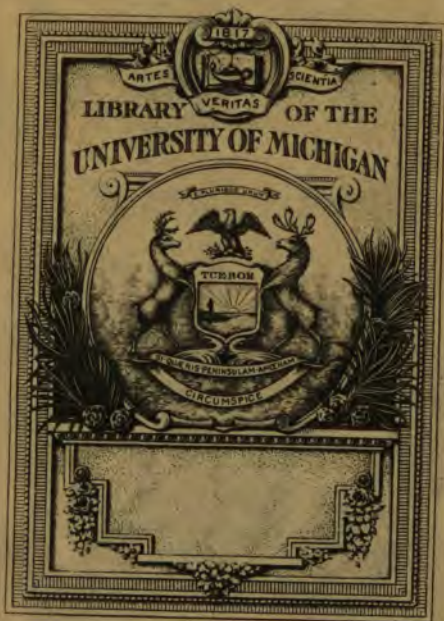
Professor in the Ohio State University

COLUMBUS

A. H. SMYTHE, PUBLISHER

1882





Compliments of J. H. Short

1902

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PRESS
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COLUMBUS, O.

OHIO.

A SKETCH OF INDUSTRIAL PROGRESS.*

Twenty years after the landing on Plymouth rock, the French Jesuit fathers Chamouot and Breboeuf discovered the northern shores of the present State of Ohio, in a coasting voyage to the Straits of Macinac. But it is to the bold enterprise of Robert Cavelier de la Salle that we must attribute the discovery of the river from which the State is named, a river which is to the State what the Rhine is to the German Fatherland.

At Lachine, his trading post above Montreal, La Salle listened with kindling desire to the tales of the Oyo, said by his Indian informants to be a grand river rising near Lake Erie and flowing away to a vast sea, through a course that it would take eight months to traverse.

* A lecture delivered at the Ohio State University, by John T. Short.

In 1667, confident that the majestic stream which the Iroquois had named Oyo (a term meaning beautiful) reached the Gulf of California, he asked permission to explore it. Commissioned to execute the undertaking, in company with the missionaries Gallinee and Dolier, he visited the Iroquois in 1669, established the correctness of the report as to its course, but was at first restrained from descending upon its tide by the objections that the jealous Iroquois interposed to his trading with the tribes to the Westward, and by the failing courage of his companions, who were alarmed by reports of the cruelty of the Andastas and the Shawnees. Recently published documents, however, show us the dauntless courage of La Salle, who, leaving his clerical companions, procured a Shawnee captive for a guide, with whom he pursued the course of the great river from its sources near Lake Erie, as far as the rapids at Louisville. Here, attempting to follow the stream on foot, he was forsaken by his companions. Alone, four hundred leagues from home, he was forced to retrace his steps and to subsist throughout his wanderings on herbs and plants given him by the Indians. In 1677 he affirms that in the "year 1667 and those fol-

lowing" he made "several expensive journeys to the country south of the Great Lakes and between them and the great river Ohio." The date is confirmed by a letter from M. Talon to the king, dated Nov. 2, 1671, which speaks of La Salle's absence in the country to the southward, while in a memoir of M. de Nouville, of March 8, 1688, we read that "La Salle had, for several years before he built Creve-Cœur, (1679) employed canoes for his trade on the rivers Oyo, Oubache (Wabash) and others in the surrounding neighborhood, which flow into the river Mississippi." Such was the beginning of commerce on the Ohio. The evidence goes to prove that La Salle had traced the river from its source to its falls, two years before Marquette saw its mouth at the Mississippi. Yet it was Marquette's achievements that fired La Salle's ambition. Going to France in 1677, he unfolded to the king a scheme of inspiring magnitude by which the colonies of France could be founded in a temperate and fertile region "capable of great commerce" and "such a hold of the continent obtained that in the next war with Spain, France would drive her from North America." The valley of the Ohio was to become a factor in the problem by which

not only were the results of Spanish discoveries to be cancelled, but one in which Louis XIV would demonstrate to the world that there were no more Pyrenees.

Returning to the Lakes with a commission of discovery and a concession granting him a monopoly of buffalo skins, he made the portage of Niagara Falls, and upon the river above built the Griffin, a ship of sixty tons, in which he made the voyage from Niagara to Macinac in twenty-one days (Aug. 7th—28th, 1679). Sent back with a cargo of furs, while the explorer pushed westward to the sources of the Illinois river, the Griffin was lost. Therefore, in the first of those movements inaugurated by La Salle, which, though discouraging at first, were crowned, in 1682, with his splendid descent of the Mississippi, we have the first chapter of the history of commerce on Lake Erie written. Nor will that history present a picture worthy of its splendid beginning, until broad-handed enterprise triumphs over the obstacles of nature, and provides a highway for our navies from the lakes to the Mississippi. The French colonization of the West was desultory and chiefly for the purposes of trade. However, forts were erected in considerable

numbers for the maintenance of possession. Among them were Niagara, Presque Isle, on the site of Erie, Pa.; La Bœuf, a short distance to the southward of the preceding; Venango, on the Alleghany river; Duquesne, at the head of the Ohio; Sandusky; Miami, on the Maumee, and Ontanon, on the Wabash. English settlers, meanwhile, had established themselves in the region thus encompassed by the French arms. To these, in 1749, Celoron, the commander at Detroit, gave notice to depart, and on the refusal of some who had settled at Sandusky, he arrested them. Celoron journeyed to the Ohio, provided with lead plates bearing an inscription announcing the claim of France to all the lands watered by the Belle Riviere and its tributaries. These were buried in the river's bank or nailed to trees growing by its side.

In 1750-1 the Ohio Company, formed two years earlier, sent out its exploring parties under Christopher Gist, who followed the river to its falls and brought back exciting reports of the richness of the valley.

The French having appeared in force at Venango, Pa., George Washington, at that time twenty-one years of age, was selected to

8 *Washington's First Expedition.*

visit Venango with a communication from Governor Dinwiddie. On his return the young surveyor recommended the erection of a fort at the head-waters of the Ohio, and the Assembly of Virginia voted a large sum for the purpose. The attempt of the English colonists and its temporary failure is familiar history.

The first military exploit of Washington was a bold effort to secure and hold the Valley of the Ohio.

The treaty of 1763 assigned the Great West to the English, but it at the same time closed every avenue to emigration. By royal proclamation the newly acquired territory was reserved to the use of Indians and persons who were not entitled to settle within the colonies.

It was not until the Declaration of Independence was published that the forests north of the Ohio were penetrated by settlers from the States. Ohio, at the outbreak of the Revolution, was known as the District of West Augusta. More than the Declaration was required here, as elsewhere, to secure independence of British control. The Northern forts at Detroit, Vincennes and Kaskaskia were then in the hands of the English. To

rescue the Ohio valley, George Rogers Clark, commissioned by Patrick Henry, then Governor of Virginia, undertook, in the spring of 1778, an expedition to the falls of the Ohio. Passing them, he made all possible speed, day and night, to a point about sixty miles from the Mississippi. Landing, he pushed through the forest and over the prairie to Kaskaskia, which, on the night of the fourth of July, he surprised and compelled to surrender. Kahokia was the next to submit. Vincennes was induced to declare allegiance to the American cause, through the mediation of Father Gibault, who, with a small band, proceeded to the post. Such wholesale dispossession wrought by a band of one hundred and fifty daring rebels, excited both the indignation and contempt of the British Governor Hamilton, of Detroit. With a picked batallion of regulars and savages, he occupied Fort Vincennes in October and began the organization of the savages for a war of extermination by offering standing rewards for scalps, but none for prisoners. Learning that Hamilton had scattered his large force so as to leave but eighty men in Fort Vincennes, and feeling his own helpless and isolated condition, Clark, with desperate daring, deter-

mined to risk all in striking one decisive blow upon Vincennes.

In February, after a march in which they were compelled to wade breast deep through flooded districts, Clark and his heroic band entered the town and attacked the fort. After fourteen hours' firing, Hamilton proposed to surrender if allowed to march out with colors flying and with permission to go to Detroit. This was refused with the declaration of Clark, "I will not again leave it in your power to spirit up the Indian nations to scalp men, women and children." The fight was reopened, but before the evening of the twenty-fourth, Hamilton and his garrison surrendered unconditionally. In the Spring, the Indian uprising was met as vigorously and successfully and Clark had conquered the Northwest for free government.

The Virginia Legislature bestowed upon the vast region now occupied by five States, the name of "Illinois county." To Clark belongs the honor of extending the boundary conceded in the peace of 1783, from the Alleghanies to the Mississippi, since France and Spain both wished that the country northwest of the Ohio should be guaranteed to Great Britain. The hold won by those daring spir-

1840

its made the Northwest a part of the Federal Union and not a dependency of Canada and a crown. Virginia had equipped these expeditions and had voted a regiment of infantry and a company of cavalry for maintaining her hold on Illinois county. When she opened an office for the sale of these newly acquired lands, the other States protested, while Congress remonstrated that the new territory, claimed now not only by Virginia, but by Massachusetts and Connecticut on the ground of their charters, should become the common property of all, and should be at the disposal of Congress, to be settled and formed into distinct States as members of the Federal Union, with all the rights of sovereignty and freedom enjoyed by other States. Congress embodied these principles in a resolution in Nov., 1780, and successively New York (1780), Virginia (1784), Massachusetts (1785) and Connecticut (1786) ceded their claims on the terms of the resolution. Virginia, however, and Connecticut made reservations; the former of a large tract between the Scioto and the Little Miami, and the latter all the land bounded by her charter limits within one hundred and twenty miles of the Pennsylvania line. The Connecticut Reserve, thus de-

finer, became the source from which that State drew sustenance for her justly admired system of schools. Though debtor to Ohio for her highest ornament, she has made Ohio debtor by her example.

The formation of the Ohio Company in 1786, and the establishment in 1788 of its settlement at Marietta, so named in honor of Maria Antoinette, Queen of France, on the Company's purchase of a million and a half of acres, marks an epoch in western history. Meanwhile, two vast strides had been made in the progress of free institutions in America. The one was the formation and adoption of the Constitution, and the other, in the same year, the passage, by Congress, of the famous Ordinance of 1787, which for decades was to serve as a sheet anchor of Constitutional freedom in the North west.

The sixth article, prohibiting slavery, whether attributable to Jefferson, or Dane, became a veritable pillar of liberty. The additional provisions of the Ordinance as to the inviolability of private contracts, for the writ of habeas corpus, trial by jury and a representative government gave to a wilderness that law and order which in many old

communities is only won through long struggles, if won at all.

The Congress of the Confederation, weak and pitiable in its helplessness, retrieved forever its honor in its last gift to the country. In the Ordinance of 1787, that body erected to itself an enduring monument, which must ever cause the memory, while oblivious to failure, to hold fresh and sacred the philanthropy and nobility of spirit that actuated our fathers. Nor were morality and education neglected. Already in 1785, Congress, in an act for the survey and sale of the public domain, had reserved one section in each township for the use of schools. The Ohio Company, among whose organizers and colonists were General Rufus Putnam and Dr. Manassa Cutler, set apart two townships for a university, and sections sixteen and twenty-nine in each township for schools and religion.

The government provided for the Territory by Congress, had little of the spirit of the Ordinance in its provisions. General Arthur St. Clair was appointed Governor by Congress, as were also Judges Parsons, Varnum and Symmes, his associates in the government. In this body was vested legislative, executive and judicial powers. The people

to be governed were wholly left out of consideration. The governor and judges formally ushered in their administration at Marietta, July 9, 1788. They at once proceeded to adopt laws from the statute books of other states for the government of the Territory. In 1795, on receiving additional powers from Congress, they proceeded to adopt the English common law, and to enact a body of laws, which they copied chiefly from the Pennsylvania statute books.

The purchase of upwards of three hundred and eleven thousand acres by Judge Symmes, led to the founding of Cincinnati, the site of which, he soon sold to Mathias Denman, of New Jersey. Colonels Patterson and Ludlow, representing the purchaser, reached the locality in question, Dec. 26, 1788, and during the winter, laid out a town, for which the barbarous name of Losantisville, meaning a town opposite the mouth of the Licking, was chosen, though, according to Burnet, never adopted.

Speculation early sprang up among certain members of the Ohio Company, who formed the Scioto Company, for the sale of lands, adjoining the Ohio Company's tract, of which they claimed ownership. In 1788, Joel

Barlow, the poet, went to Paris in the interest of the company. The publication of Brissot's travels, contributed to promote an intense interest in the representations made, and purchasers became numerous. Volney tells us that "nothing was talked of in the Parisian circles but the free and rural life to be led on the banks of the Scioto."

About five hundred settlers in all, reached the Ohio River and founded Gallipolis, (1791 and 1792) only to find that they had been duped. They were mostly well to do mechanics, tradesmen and artists. Among them were "Carvers, guilders to his majesty, coach and peruke makers, friseurs and other artistes about equally fitted for back woods life, with only ten or twelve farmers and laborers." In consideration of their losses, Congress gave the settlers twenty-four thousand acres of land in Scioto county. A French caricature issued in Paris, at the time of Barlow's visit, representing the conduct of the negotiations, bears the title "Sale of the deserts of the Scioto, by the Anglo-Americans."

The campaigns of Harmer, St. Clair and Wayne, afford a chapter of the horrors of frontier warfare which none could wish to

contemplate. At the treaty of Greenville, in 1795, the latter secured a guarantee to the settlers, from eleven of the most powerful tribes, of the peaceable enjoyment of all the lands now embraced in Ohio, while government, on its part, engaged to pay perpetual annuities to contracting tribes.

The growth and distribution of population was such that, by the middle of 1797, four counties had been established, well representing the area of occupancy. Washington county embraced almost the eastern half of Ohio. Hamilton county included the country between the two Miamis. Wayne encompassed in its ample circuit all of north-western Ohio, a large area in north-eastern Indiana and all of Michigan. Adams county comprehended a belt of territory on both sides of the Scioto, as far north as the southern boundary of Wayne. Out of these, four new counties were soon formed, and in 1798, the Northwest Territory found itself possessed of a male white population of five thousand, of adult age, residing in eight counties, and consequently, entitled, by the provisions of the Ordinance, to elect a Territorial Legislature, and to secure a voice for its citizens in the government. The first Terri-

torial Legislature, elected by free-holders of fifty acres of land, assembled at Cincinnati, Sept. 24, 1799, and chose William Henry Harrison delegate to Congress. This honorable body illustrated its enlightenment in the declaration that "Religion, morality and knowledge are necessary to all good governments. Let us, therefore, inculcate the principals of humanity, benevolence, honesty and punctuality in dealing, sincerity, chastity and all the social affections." Yet, during a session of but three months, Governor St. Clair vetoed eleven of its acts.

In 1800, Congress created the Territory of Indiana, fixing its boundary by drawing a line from the mouth of the Kentucky River to Fort Recovery, and northward to the Territorial limits. The second Legislature finding itself less able to agree with the Governor than its predecessor, looked hopefully for the admission of Ohio into the Federal Union. In Nov. 1801, the third Legislature took up the question and passed a bill prescribing the Scioto as the western boundary of Ohio, and asking Congressional authority for the establishment of a State government within those limits. So active, however, were the minority, led by Colonel Worthington, that Con-

gress rejected the overtures of the majority, and passed a bill authorizing the formation of a State government, with its territory bounded on the West by a line running northward from the mouth of the Great Miami. When the constitutional convention met at Chillicothe in Nov., 1802, Governor St. Clair animadverted on the provisions of the bill in such terms as to seriously offend President Jefferson, who at once removed the autocratic General from office. On the twenty-ninth of the same month, the convention ratified, and signed the first constitution of Ohio, an instrument which was complete and binding, in view of the authority conferred by Congress, without ratification by the people. It does not belong to this sketch to present an analysis of the constitutional system of the State, and it will suffice for us to note that the principles of the Ordinance of 1787, and the enlightened sentiments of the first Territorial Legislature were accorded a conspicuous place in the instrument, while gubernatorial vetoes, and property franchise qualifications were discarded forever. Such was the auspicious beginning with which the political life of Ohio was ushered in. Its career, as a factor in American government, needs no

comment here. It is rather the social and industrial condition of the State, that at periods of its birth and adolescence has eluded the eye of all but a limited class of observers. It is difficult to realize the poverty and homeliness of that beginning. Yet the very poverty wore a tinge of glory, as it was in large degree the result of sacrifices made in maintaining the desperate struggle for independence. Many of the first settlers had exhausted their fortunes in the war, and as Burnet tells us, had "Retired to the wilderness to conceal their poverty." The isolated situation of the settlements, cut off by a broad belt of mountains, tended early to the development of individual and local character. The only means of communication with civilization, at first, were by pack horses, which were soon displaced by the great Pennsylvania wagons, drawn by four or six horses. Not a pleasure carriage was owned within the State at the date of its organization. The roads were little better than trails, and were generally so bad as to be often discarded for the course indicated by the pocket compass. Judges and lawyers rode from court to court, carrying their provisions with them, swimming swollen streams, and at night camping

in the forest. Caleb Atwater reports having seen a grand jury and constable sitting under a tree; the constable keeping off the crowd so as to prevent their hearing the testimony of witnesses; while under a neighboring tree another constable was occupied in guarding a petit jury as they deliberated upon their verdict.

The greatest impetus to emigration in the early history of Ohio was given by the passage, in the initial years of the century, of modifications of the land laws, providing for the sale of quarter sections of land, at two dollars per acre, on a credit of five years. Multitudes became free-holders, as a consequence of the sub-division of tracts, previously obtainable only in sections of six hundred and forty acres. The effect may be judged, from the fact that, according to the census of 1800, the year in which the land law was first modified, the entire Northwest Territory had a population of scarcely more than 45,000, while in 1810, Ohio alone reported a population of over two hundred and thirty thousand; or nearly six inhabitants to the square mile of area. During the first decade, however, the difficulties of transportation put a check upon a corresponding increase of

prosperity. The most accessible market, New Orleans, was remote, and the tedious voyage in pirogues, flat-boats, and keel boats, moved by oars and setting poles, required six months for its completion in both directions. The value of a cargo was nearly consumed in the transportation. It could hardly be otherwise, as corn and oats brought but eight or ten cents per bushel, and wheat from thirty to forty cents, while beef and pork sold at a dollar and a half a hundred. The market, therefore, was almost wholly a domestic one, and agriculture, in nature's veritable garden, lay powerless to bless. The plow-furrow could no how be made the highway to a competency.

To relieve the depression created by the absence of commerce, "The Miami Exporting Company" was organized in 1803, with a charter granting them banking powers, that, in case commerce should prove unprofitable, their capital might be employed in banking operations. Soon an improvement in the system of transportation was effected by the introduction of sail barges, carrying from fifty to one hundred tons, and, under favorable conditions, making two round trips to New Orleans per year. The price of freight from

Cincinnati to New Orleans was reduced to five or six dollars per hundred, and the volume of trade increased at a remarkable pace. The exports of the State in the single year 1809-10 were trebled. Nor were domestic manufactures in arrears, since, according to the census of 1810, no less than 10,586 looms were at work in Ohio. The State which ranked ninth in geographical extent, had advanced during the decade to the position of thirteenth in point of population, fifteenth in value of domestic exports, and sixteenth in manufactures, Delaware alone falling behind in the last respect.

Transportation and trade now received an impulse of which the most sanguine friends of Western commerce could scarce have dreamt. Robert Fulton, with the *Clearmont* on the Hudson, had demonstrated the supremacy of steam. Now turning westward in search of new triumphs, jointly with Chancellor Livingston, commissioned Mr. Roosevelt, of New York, in 1809, to make an examination of the Ohio and Mississippi and to report upon the practicability of navigating those rivers with steam craft. The report being favorable, Fulton built the "*Orleans*," the first western steamboat, at Pittsburg, in 1811, and in October

Mr. Roosevelt and his family sailed for Louisville, where they arrived on the night of the fourth day of their voyage. The unsuspecting namesakes of Louis XIV, aroused from their slumber by the puffing steam, as the Orleans touched their shore, believed the great comet, which then shone in the heavens, exciting the fears of the superstitious, to have fallen into the Ohio. The water on the falls at Louisville proving too low, the Orleans made several successful trips between Louisville and Cincinnati. In the last week of November the passage of the rapids was made, and though nearly overwhelmed by the earthquake that destroyed New Madrid, Missouri, December 15th, 1811, the Orleans arrived in safety at Natchez, her destination, in the first week of January, 1812.

Other steamboats were constructed with little delay, but not until May, 1815, was a steam voyage made up the Mississippi and the Ohio, when the "Enterprise" arrived at Louisville, after a passage of but twenty-five days, in which the triumph of steam over the Western waters was rendered complete. The whole aspect of trade was changed in the following four years, during which time forty-one steamers were launched upon the

Ohio and Mississippi. Instead of cargoes of thirty tons, borne in keel boats, Ohio merchants were enabled to ship in vessels of four hundred tons burden, that accomplished their voyage to New Orleans in a fortnight.

The second decade of the century could not have been other than prosperous but for the war of 1812, and the financial distress of the subsequent years. After the conclusion of peace, December, 1814, commerce sprang into new life for a time; excessive importations were made; speculation ran wild; the local banks chartered during the war furnished paper money for the common ruin; emigration to the Western valleys broke over nature's barriers like a tide; and had moderation prevailed, happiness must have ensued. But in the face of the establishment of steam navigation, and the influx of population, insolvency overtook the West in the crash of the banks, incident partly to the excessive speculation which their currency had encouraged, and to the establishment of branches of the Bank of the United States at Chillicothe and Cincinnati, and to the policy adopted by them toward the local banks.

In 1816 the State Capital was permanently located at Columbus, and the State Library, now containing over 50,000 volumes, founded, with a few volumes purchased by Governor Worthington, with a contingent fund.

Out of the darkness that had prevailed came signs of a radiant day. Population had increased, agriculture was springing into new life, and only the magic breath of public confidence was requisite to brighten the murky atmosphere. The touch of life and fire came with the movement for internal improvements. Washington, catching up the spirit of progress which pervaded England, spoke in 1774 of a system for connecting the Ohio with the Atlantic, and in October, 1784, urged Virginia to inquire into the facilities for opening communication between the Ohio and Lake Erie by way of the Cuyahoga and Muskingum or Scioto, a project really suggested by Mr. Jefferson six months earlier. A canal was included in Mr. Jefferson's plan. In 1787 Washington renewed his efforts in behalf of internal improvements, in the territory north of the Ohio, and pressed his plan upon the attention of the general government.

Quite as important to Ohio was the construction of a highway to the seaboard. As early as 1777 Gouverneur Morris had proposed the great New York canal, a proposition which he lived to actively carry into execution, when in 1811 he was appointed chief of the commission to construct the Erie canal. When Governor Clinton appealed to the general government and to the States for aid in behalf of his noble enterprise, Ohio alone responded in words of encouragement and confidence, promising such assistance as it was within her power to bestow. No estimate of Western growth is complete which does not include the Erie canal as a factor in the problem.

If New York looks back to the 26th of October, 1825, with just pride to the completion of that monument of her enterprise, Ohio at least views with admiration and gratitude a State whose arms were stretched out with generous succor to her sister States. On the day mentioned, Governor Clinton and a distinguished company left Buffalo for New York by a large fleet of boats, one of which bore a bear, several deer, two eagles, besides a number of other birds and animals as symbols of the triumph of man over nature.

The moment of the departure was signaled by the discharge of cannon, whose thunders were re-echoed and repeated by batteries stationed all along the line, 513 miles in total length. By this system of artillery telegraphy the signal reached New York in one hour and twenty minutes. After a voyage of nine days the triumphal fleet arrived in New York harbor, where it was met by a convoy of large vessels and taken out to sea, off Sandy Hook. There Governor Clinton poured a vase of lake water into the ocean, as symbolical of the marriage of Erie and the Atlantic. Although resolutions touching the question of canals in Ohio were presented to the State Legislature in 1817, nothing was done until January, 1822, when Mr. M. T. Williams, from a committee appointed on December 6th preceding, reported a bill "authorizing an examination into the practicability of connecting Lake Erie with the Ohio River by canal." Governor Brown had, in three successive years, without avail, pressed the question of canal construction upon the attention of the Legislature, and the bill passed January 31, 1822, for the purpose indicated by the above title was the result of his persistency. Surveys

were conducted until February 4, 1825, when a bill was passed for the construction of two canals—one from the Ohio to Lake Erie, through the valleys of the Scioto and Muskingum, and the other from Cincinnati to Dayton. On July 4th, of the same year, the initial steps for carrying that act into execution were taken by breaking ground for the canal bed at a point three miles distant from Newark, in Licking county. Governor Clinton, and other distinguished visitors, assisted in the ceremonies of that eventful day. Before the close of the decade both lines were well on toward completion, and had yielded tolls in 1830 of nearly one hundred thousand dollars. The system thus begun was extended until the State had made 782 miles of artificial water way within its bounds, at an expense of sixteen millions of dollars. This system proved, soon after its establishment, an inestimable blessing, and continued to exert its life-giving influence upon agriculture and every industry for a period of thirty years. Agriculture owes its very existence, in the second quarter of the century, to the canals. In 1824-5 wheat was worth only thirty-seven cents in the interior counties, while corn sold for ten cents; but

after the completion of the New York and Erie canals, and the Ohio canals, these prices were raised more than fifty per cent. The stride forward taken by the State, as indicated by the census of 1830, was a gigantic one. Her population had reached 937,903, showing an almost incredible increase of $196\frac{1}{2}$ per cent. in twenty years, and a density of population of twenty-three persons to the square mile. Scarce thirty years had elapsed since the State, with less than 60,000 inhabitants, had been admitted to the Union. Within that brief period she had advanced to the rank of fourth in point of population among the twenty-four States composing the Union. In 1833 Salmon P. Chase comments upon these facts with becoming ardor, contemplating the canal system, and alluding to Joel Barlow, remarks: "Her enterprise has realized the startling prediction of the poet, who, in 1787, when Ohio was yet a wilderness, foretold the future connection of the Hudson with the Ohio." It was with true prophetic insight that Barlow looked beyond the unpromising scenes that encompassed him, to the triumphs of peace and sang, in his "Vision of Columbus"—

30 *Establishment of Common Schools.*

"From fair Albainia tow'rd the falling sun
Back through the midland, lengthening channels run,
Meet fair lakes, and beauteous towns that lave,
And Hudson joined to broad Ohio's wave.

From dim Superior, whose unfathomed sea
Drinks the mild splendor of the setting day,
New paths, unfolding, lead their watery pride,
And towns and empires rise along their side;
To Mississippi's source the passes bend,
And to the broad Pacific main extend."

With the movement for the construction of the Ohio canals, another, for the establishment of our common schools, was inaugurated. Though provision for educational support had been made on the part of the Congress of the Confederation, in the Ordinance of 1785, by the reservation of a section of land in every township, for the use of schools, and though the Ordinance of 1787 and the Constitution had both declared that "schools and the means of instruction shall forever be encouraged by legislative provision," still almost a quarter of a century elapsed after the organization of the State, before any attention, save a few allusions in the messages of the State Governors, was bestowed upon the establishment of a common school system. The earliest agitation of the subject came in about 1816, from three points representing the three

angles of a geographical right-angled triangle, Cincinnati, Marietta and the Western Reserve. When, in 1819, a bill for the establishment of common schools, introduced by Ephriam Cutler, of Washington county, was lost, the friends of education resolved to make an issue with the party in favor of internal improvements, in which concessions in favor of education would become a necessity to the success of the former. Consequently, the same day (Dec. 6, 1821) in which the committee on canals was appointed, Caleb Atwater moved a committee on schools, and on the day following that on which the law for the canals was passed (Feb. 4, 1825) a bill for the establishment of our common schools was passed. Thus was the supreme and necessary law of all progress recognized: That material and intellectual advancement must go hand in hand for the building of a State.

With this epoch of internal improvements, the coal and iron industries of Ohio, so vast and yet unmeasured, came into active existence. Mineral coal had been discovered as early as 1755, at Bolivar, Tuscarawas county, from being accidentally ignited by superimposed fires. From 1810 to 1819 coal was mined for blacksmithing and for local

use at Tallmadge, from whence it was shipped by the father of Dr. J. S. Newbury, on the canal, to Cleveland in 1828, and came rapidly into the Northern Ohio market. In Southern Ohio, Samuel W. Pomeroy, from Boston, purchased extensive coal lands in 1803, in the locality now bearing his name. It was not until 1818 that he made inquiry as to the amount of coal consumed at Cincinnati and other river cities, with a view to ascertaining the practicability of developing the resources of his own lands. He ascertained that the annual consumption of coal at Cincinnati, Louisville and Maysville amounted to but 4,640 tons, furnished chiefly from Pittsburgh. It was as late as 1833 before the systematic mining of coal was begun at Pomeroy, the pioneer mines of southern Ohio. Prior to this date, coal was not used for domestic purposes in the river towns and it was not until three years later that the experiment of towing coal by steam tugs was made on the Ohio. The market price of coal in 1834 was twenty cents per bushel, but to encourage domestic use, the Pomeroy proprietors advertised that they would supply families at the special rate of twelve and a half cents per bushel, delivered. Little did those

early operators dream of the vast industry they were inaugurating, that in less than half a century would yield in Ohio alone a production of six and a half millions of tons per annum.

Simultaneously with the rise of the coal interest, the iron industry of Ohio was set on foot. As early as 1804, David Heaton built a blast furnace on Yellow Creek, in Mahoning county. In the following year a second furnace went into operation and ran until 1812, when all the operatives were drafted for military service. Steam was first employed within the State for making blast, in an Adams county furnace, in 1814. But it was at Pine Grove furnace, in Lawrence county, erected in 1829, the first to undertake the making of iron, that the industry may be said to have begun its uninterrupted career of activity. The annual capacity of Pine Grove furnace was the production of 4,500 tons of charcoal iron. A half century has elapsed, and the number of furnaces has increased to one hundred and six, with an annual capacity of over a million tons.

No survey of the first three decades of Western history would be complete that neglected the construction of the Cumberland

road, the first direct avenue of communication between Ohio and the sea-board. In the act of Congress for the organization of the State, five per cent. of the net proceeds of the lands lying within its bounds belonging to Congress, were set apart for laying out and making roads in the State, and from it to navigable waters emptying into the Atlantic. Three-fifths of that reservation were subsequently designated for road construction within the State limits. It is a matter worthy of note that during the period from the inception of the movement for the building of the road, March 29, 1806, until it was extended to the Ohio River, March 3, 1825, nineteen years in all, out of the \$582,984 appropriated for construction, the Federal treasury was reimbursed to the amount of \$270,000 from the sale of Ohio lands. Thus Ohio paid for little less than one-half the cost of the road before it reached the State boundary. Subsequent to 1825 the sum of \$1,213,650 was expended on that part of the road lying within the State, and \$330,000 for the completion and repair of the portion east of the Ohio. Out of the total sum of \$2,126,634, appropriated by Congress down to 1838, for the making and maintenance of the

national highway from Cumberland, Md., to the point at which it crosses the western boundary of Ohio, it appears that almost two-thirds of that sum was provided from the proceeds of Ohio land sales. When in 1834 the road was surrendered by Congress to the States through which it had been built, it was not yet completed through Ohio; still from that date it became a great artery of State and national activity. Its fast mail coaches, supplied with relays of horses at every ten miles, its hospitable red brick inns, and its long trains of ponderous produce wagons, all are vividly remembered by a generation yet living.

Ohio's career, politically, had thus far been in large measure confined to State concerns. While freely expressing herself on questions of national policy, she could not yet be said to have crossed the boundary between State and National politics. Nor had she in any way won a place in Federal affairs. Caleb Atwater, writing in 1838, utters a jeremiad, which has been re-echoed more than once from sister States in these later years. "The reverse," he prophetically declares "of our own situation must one day be our lot. Now, when New Hampshire,

New Jersey, South Carolina and Georgia have four Secretaries at Washington, and we two inferior Clerks. * * * This state of things cannot last long before Ohio has a voice and an influence at Washington. No President or Attorney General will dare then to treat with contempt our citizens and our members of Congress." For nearly four decades Ohio had been gathering her strength and making sure her foothold. But scarce had the plaint of her prophet died upon the ear, when she threw herself into the national arena to win the day and give the country a President in the person of Harrison. In the very year in which Ohio aspired to national influence, the census (1840) told the world that the State had, with a population of a million and a half, taken the rank of third in the Union, a position she has maintained ever since. Yet it surprises us to read now that in 1840 Cincinnati had a population of but 46,000, and the State did not contain another city of 7,000 inhabitants. Notwithstanding the financial stress of 1837 the State had made a grand stride forward.

The statistics of her advance read like an Arabian tale to one who reflects upon her feeble and not remote beginning. Are

figures barren and uninteresting that enumerate the cereal grain productions of the State for the year, 1840, as more than sixty-six and a quarter millions of bushels; sixteen and a half millions of the same being wheat? Had Ohio been blessed with cattle, only upon a thousand hills, every hill must needs have pastured more than twelve hundred; or, are statistics lacking in weight or wealth, that report the production of thirty-five and a quarter thousand tons of iron, and an out-put of three and a half million tons of coal? Education, too, was keeping pace with wealth, for six thousand students attended her colleges and academies, while two hundred and seventy thousand pupils were taught in her common schools.

The decade that had just passed, contributing so nobly to the progress of the State, saw the beginning of the railway, and with it the promise of multiplied prosperity. The first Ohio railway, the Mad River and Lake Erie, was incorporated in 1832, with a prospective route from Dayton, via. Springfield, to Sandusky. Construction was begun in 1835, and a portion of the road opened in 1838. Ten years later this road, in connection with the Little Miami Railway, opened from Cin-

cinnati to Springfield in 1846, formed the first through railway line from the Ohio to the lake. The second through line from the lake to the Ohio was opened in 1851, under the name of the Cleveland, Columbus, Cincinnati & Little Miami Railroad. The following year chronicled the opening of a third line, from Pittsburgh to Cleveland. These were but the feeders of the great trunk roads opening to the seaboard. As early as 1827 the Baltimore and Ohio railroad was projected and chartered, and construction begun a year later, though it was not opened to the Ohio until 1853. The enterprise was prompted with a view to recovering the western trade cut off from Philadelphia and Baltimore by the Erie canal. The Pennsylvania railway was prompt to occupy the field in 1854. Meanwhile other rivals of the great canal had thrust themselves into its own territory. The Erie Railway was opened from the Hudson to the lake in 1851, and in the same year the Hudson River railroad and the New York Central line, making two iron highways from the lakes to the sea. The competition of the roads with the canal was at first feeble. In 1852, twenty-six times the volume of western freight carried by the railways was moved

eastward by the canal. Yet the race was soon to become an unequal one, for when the decade had closed, (1860), the tonnage of western freight carried by the trunk lines was double that of the canal. A geological subsidence that would have opened the Ohio to the sea upon the east and to the lake upon the north could not have done more for the prosperity of Ohio than the building of the railways. Their influence on agriculture is especially marked. In 1838, sixteen pounds of butter were required for the purchase of one pound of tea; now two pounds are adequate, showing that the purchasing power of butter has increased eight fold. Then, four pounds of butter would prepay one letter to the seaboard; now, the same amount of butter will pay postage on forty-one letters. Then, one bushel of wheat would pay for but two letters; now, a bushel of wheat will buy forty postage stamps. Although the price of produce advanced fifty per cent. on the completion of the canals, it was found in 1860, by a comparison of Cincinnati prices in 1848, that the railroads had been instrumental in doubling the price of flour and lard, tripling the price of hogs, and quadrupling the price of corn. The net gain to Ohio farmers in the ad-

vance of hogs for the decade, amounted to upwards of four millions of dollars. In 1860 12,000,000 bushels of wheat were exported from Ohio, and an equal quantity of corn, reduced to various forms. With the railways came also the center of population, our veritable star of empire, that westward takes its way. Following the thirty-ninth parallel, the center passed the Ohio river in 1852 or 1853, and in 1860 was located at twenty miles south of Chillicothe, in 1870 at forty-eight miles east by north of Cincinnati, and in 1880 at a point eight miles west by south of Cincinnati.

Turning from these glimpses of the past—a past in which the growth has been from strength to strength—may we not properly inquire, what are the grounds of Ohio's present pre-eminence? To make the inquiry for the purpose of augmenting, in the least, the already exalted estimate placed upon the fair commonwealth by all her sons, would be a deliberate abuse of the truth, for feeding a pride, that needs no nourishing.

But, to ask it modestly, with a view to arriving at a reason for the faith that is within us, is to invoke the truth for the fulfillment of her highest mission.

Viewed in physical and agricultural aspects, Ohio is a favored region. The 40,000 square miles embraced within the State presents no mountain chains, no barrens nor marshy wastes, but a slightly elevated plateau of uniformly arable land, furrowed by luxuriant valleys whose streams upon one side drain to the Lakes, and through the St. Lawrence to the sea. While on the other, they find their outlet to the Gulf through the Ohio and Mississippi. When Christopher Gist visited the region as agent of the Ohio Company, he found it in part clad with noble forests of hickory, walnut, ash, poplar, sugar-maple and wild cherry trees; in part stretching out into spacious plains covered with wild rye, natural meadows clad in blue grass and clover, affording pasturage for herds of buffalo, deer, elk, and wild turkeys abounded, and the explorer exclaimed "nothing is wanted but cultivation to make this a most delightful country." How has cultivation justified that prophecy? The driest statistics become rhythmic numbers in response.

In 1880, the cereal crop of the State amounted to 188,933,077 bushels; of which 46,000,000 were wheat and nearly 112,000,000 were corn. If to this be added the po-

tato crop of upwards of 10,500,000 bushels, we have an annual product of nearly 200,000,000 of bushels of farinaceous food, or $62\frac{1}{2}$ bushels per inhabitant, on the basis of the census of 1880, which fixes the population at 3,198,062. To this must be added 32,000,000 bushels of orchard products, affording 10 bushels to each inhabitant, and 83,500,000 pounds of dairy products, or 26 pounds to each inhabitant. The average yield of grain and potatoes in Great Britain, France and Austria combined has been reported at 10 bushels per inhabitant. Ohio's yield per individual is shown to be above six times as great. Assuming that our people live twice as generously, consume twice as much as do Europeans, it is apparent that more than two-thirds of our crop is free for exportation, and may be safely estimated at a value of \$100,000,000 per annum. From the United States census cereal table, it appears that Illinois and Indiana each produced more wheat in 1880 than did Ohio. Illinois is ranked as the first wheat growing State in the Union, while Indiana comes second. The discrepancy between the census report and that of Secretary Chamberlain, of the Ohio State Board of Agriculture, is glaring. According to the latter,

Ohio's yield in 1880 was 48,500,000, 1,259,000 more than Indiana, or 2,500,000 less than Illinois. It is not, however, on the returns of a single crop that Ohio would stake her precedence as a wheat raising State. The averages of a series of years will declare in her favor. The estimated wheat crop of Illinois for 1881, according to the Illinois Secretary of Agriculture, is but 22,000,000 bushels, while that of Ohio is 38,000,000. An examination of the tables published by the Agricultural Department of Illinois shows that no wheat crop in that State prior to 1879 exceeded 34,000,000 bushels; therefore, we must regard the crops of 1879 and 1880 as exceptional, and not stable enough to determine the agricultural rank of that State for a decade, as a producer of our most important cereal. Eight Ohio counties, namely: Darke, Greene, Hancock, Miami, Sandusky, Seneca, Stark, and Wayne each produced over 1,000,000 bushels of wheat in 1880. Three counties yielded over 3,000,000 bushels of corn, each; eleven over 2,000,000 bushels, each, and thirty-four over 1,000,000 bushels, each, according to the United States census. Ohio's advantage, agriculturally, must be found in her comparative immunity

from drouth, incident to having an average annual rain-fall of from 40 to 42 inches, or 4,040 tons per acre; to her diversified crops, and a variety of lands suited to the same crop under the extremest diversity of seasons and conditions. To this estimate of Ohio's agricultural importance should be added the value of the 10,000,000 domestic animals in the State and their annual increase; the wool crop of 2,500,000 of pounds; nearly \$10,000,000, (\$9,703,646) as the value of agricultural implements manufactured, and many other items.

The mineral wealth of Ohio was scarcely conjectured prior to the organization of the geological survey. That survey revealed a coalfield of more than 10,000 square miles in extent, underlying thirty-three counties; several of these, such as Starke, Tuscarawas, Coshocton, Muskingum and others, being among the most productive agricultural counties in the State. Though equal in extent to the coal fields of Great Britain, and embracing ten minable beds, the coal measures of Ohio are lacking in the thickness which characterizes those of England, though the accessibility and ease with which the Ohio deposits are mined is without parallel. Yet, by allow-

ing nine feet for the approximate thickness of the Ohio beds and deducting one third for waste, the estimated aggregate yield for the State would amount to 62,900,000,000 of tons, which, at the present rate of consumption, would require 7,863 years for its exhaustion. The number of tons mined in Ohio during the twelve months ending May 31, 1880, as reported to the census office by Professor Orton, was 6,437,725. Of this amount 1,824,301 tons were mined in the Hocking Valley alone. But even that large annual volume of fuel has been augmented nearly twenty per cent. by the mining activity of 1881, the estimated output for the year being 8,300,000 tons, worth at present retail rates \$22,825,000, a sum that would be reduced one half if the calculation were based upon the price of coal at the mines. The output for 1881 would have paved the National road, forty-five feet wide and five feet deep throughout its entire extent across the State, or would make a carbon ribband fifteen inches wide and one foot thick, around the world at the equator.

In the production of iron and steel Ohio occupies the second rank in the Union. Pennsylvania, which leads the States, during

the decade, increased its production 97 per cent. but during the same period Ohio increased its production 107 per cent, making a return for the census year of 930,141 tons, worth nearly \$35,000,000. Over twenty thousand persons were employed in the iron industry in the State, a number second only to those engaged in agriculture. Two counties, Mahoning and Cuyahoga, produced over 200,000 tons of pig iron, rolled iron, steel and blooms; the former 219,957 tons, and the latter 210,354. Lawrence and Trumble counties produced each upwards of 70,000 tons. The production of New York in 1870 was but little behind that of Ohio, but during the decade the rate of increase of the latter grew to three times that of New York. In fact, although the entire country increased its production 99 per cent., Ohio outstripped it in the race to the extent of 8 per cent.

The business activity of any people is perhaps easiest gauged through the channels of their metropolitan city. A few conspicuous items will serve to illustrate the vigor of commercial life at Cincinnati. The following table compiled from Mr. Maxwell's Report of the Chamber of Commerce will show the

extent of the grain trade of Cincinnati, for the year ending August 31, 1881:

CEREALS.	1880-81.		1845-46.	
	RECEIPTS.	SHIPMENTS.	RECEIPTS.	SHIPMENTS.
Corn	7.737.066	2.806.052	57.235	63.220
Wheat.....	2.908.675	1.873.070	434.486
Rye	789.347	396.969	85.821
Barley	1.880.467	104.154	90.225
Oats.....	2.248.527	676.675	106.852	35.988
Totals ...	15.564.082	5.856.920	774.619	99.208

The business in flour makes the following exhibit:

1880-81.		1847-48.	
RECEIPTS, BBLs.	SHIPMENTS, BBLs.	RECEIPTS, BBLs.	SHIPMENTS, BBLs.
852.955	642.338	151.518	201.011

The Pork business, for which Cincinnati was earliest, and perhaps widest known in the commercial world, is easiest comprehended in the following table of the

receipts and shipments of hogs, and the hog product for the year ending October 31, 1881:

	HOGS, HEAD.	PORK, BBLs.	LARD, BBLs.	MEATS, LBS.
Imports..	1.053.216	3.599	13.003.365	50.489.141
Exports..	304.170	37.300	37.702.839	110.643.940

In 1832-33 the number of hogs cut up was but 85,000, while in 1880-81 no less than 522,425 hogs were slaughtered.

Among the manufacturing interests of our metropolitan city the iron industry is conspicuous.

The value of the pig iron business for the year amounted to \$9,006.830; somewhat in contrast with a value of \$1,767.000, reported for 1868-69.

The shipments of manufactured iron for the year aggregated 95,388 tons, while the receipts amounted to 121,914 tons. The largest business Cincinnati has ever transacted in any iron specialty was reached during the year in the nail trade, the receipts aggregating 578,157 and the shipments, 474,977 kegs.

Cincinnati has 5,450 manufacturing establishments, requiring a cash capital of \$67,-651.552, real estate property worth \$40,096,-458, and an army of 80,839 hands to work them. The value of their products amounted in 1881, to \$163,351.497. The approximate aggregate value of imports received at Cincinnati in the year ending August 31, 1881, is fixed at \$274,651.218, and the exports for the same period at \$271,973.776.

Foremost among the agencies of the advancement of the State are its railroads. We have recorded their feeble beginnings. How they were regarded while the first road was under construction may be judged from Caleb Atwater's declaration that more had already been chartered than would ever be built. The rumble and roar of every train on the eighty-four railroads within the State to-day is a voice that pronounces him a false prophet.

The forthcoming report of Mr. Sabin, the State Commissioner of Railroads and Telegraphs, will make many interesting and valuable disclosures. It will appear that in Ohio there were, June 30, 1881, 5,840 miles of railway, an increase over the preceding year of almost three and one-half (3.44) per cent.

The amount of stock and debt was \$380,709,530.35, an increase of nearly four (3.90) per cent. The gross earnings were \$45,843,866.34, an increase in a twelve month of nine and one-half per cent. The operating expenses amounted to \$29,378,562.82, leaving \$16,465,303.52, an increase of four and one half per cent., yielding four and one-third per cent. on stock and debt. Of the gross receipts named \$10,320,517.98 were passenger earnings, an increase of nearly eleven (10.82) per cent. The freight earnings were \$33,415,533.28, an increase of nine and three-fourths per cent. It is to be noted that the increase in mail and express earnings for the year were fourteen and twenty-seven per cent., respectively. With an increase of mileage of only three and a half per cent. there was an average increase of receipts from all sources, of eleven per cent. Such is the exhibit of a single year. Comparisons for the decade preceding 1881 show that the mileage of roads in the State has increased sixty-eight and nine-tenths per cent.; the stock and debt eighty-one and six-tenths per cent.; the gross earnings over fifty per cent.; the operating expenses forty-one and one-fourth per cent.; while to the credit of

1881

business like management the net earnings have shown an increase of seventy-one and one-third per cent.

No more interesting question comes to the attention of the traveling and shipping public than that of the rates of mileage for both passengers and freight. Fortunately the statistics of the decade show a great gain to the patronizing public. In 1871 the average rate per mile for passengers was nearly four (3.95) cents. In 1881 it was but two and one-third cents, a reduction of forty per cent., a significant fact in the face of a statute permitting the railways to charge three cents per mile. Some statesman may divine from this the existence of a higher law than that of the statute book, which expresses itself constantly in the prices of produce, money and transportation. The increase of passenger traffic during ten years reached one hundred and twenty-two and one half per cent., and of passenger receipts thirty-eight and one-half per cent. Even more gratifying is the showing in reductions of freight tariff, for while the rate per ton, per mile, charged in 1871 was two and two-tenths cents, the present rate is but nine mills, a decrease of fifty-eight and nine-tenths per cent.

in a decade. During the same period the amount of tonnage has increased three hundred and twenty-eight and eight-tenths per cent., and the receipts therefrom seventy-seven per cent.

It has been claimed by certain publicists that the civilization, and particularly the prosperity of any State may be measured by her facilities for communication, internal and external. Tried by such a test it appears that Ohio is the equal of Great Britain and the superior of France. The united kingdom of Great Britain had in 1878, 17,333 miles of railway, costing \$195,536 per mile, being one mile to every 2,000 of its population, affording a profit of four and one-half per cent. on the investment. France had, at the same time, 13,150 miles of railway, costing \$158,752 per mile, and one mile to every 2,800 of its inhabitants, affording a profit of four per cent. on the investment. Ohio had 4,975 miles, costing \$49,440 per mile, and one mile to every 530 of its population, affording a profit of three and one-half per cent. In England the tonnage of freight moved was about seven tons to each inhabitant. In France near two tons. In Ohio seven tons to each

inhabitant. The United Kingdom of Great Britain had of railways in 1878, 17,333 miles; riverways, 900 miles; canalways, 3,600 miles; highways, 127,000 miles; total mileage of communication, 148,833 miles. France had of railways in 1878, 13,150 miles; canalways, 2,300 miles; riverways, 5,200 miles; highways, 44,000 miles; total mileage of communication, 164,650 miles. Ohio had of railways in 1878, 4,975 miles; canalways, 900 miles; highways (Macadamized pikes), 6,801 miles; riverways (Ohio river), 500 miles; total mileage of communication by roads, excepting ordinary roads, 13,176 miles, being one mile of way to each 229 inhabitants. Compared with her population Ohio has more public ways than has either France or the United Kingdom of Great Britain. Looking beyond mere internal facilities we observe that four of the eighty-four railways in Ohio are grand trunk lines, crossing her opposite boundaries in their course from the sea to the father of waters. Even more is seen to be true, when it is realized that on the north 6,000 miles of interior coast line is accessible to our shipping in the lakes alone, without taking the St. Lawrence into account; while upon the south and west 36,000

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